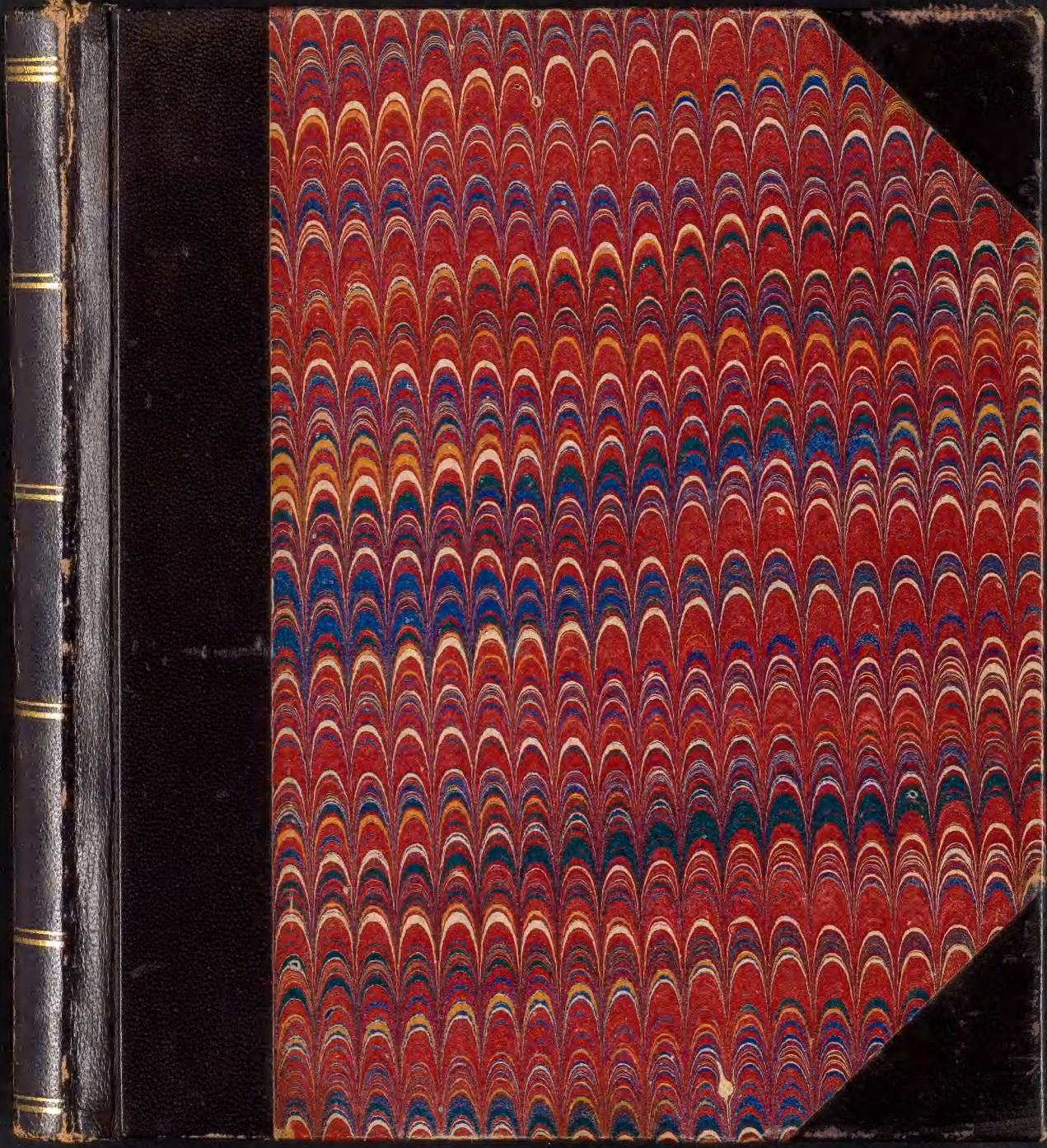


Puccinia suaveolens.

Spermogonia & uredo appeared May 25.th 1883.
Uredo-spores chocolate colored, echinulate
globose or oval 22-28 μ, average 25-26 μ.

Uredo Filicum. on Cystopteris. Granville.

June 8. 1883. Sori on petioles and under surface of leaf, minute, oval, sunken surrounded by hypertrophied cortical cells, at first brownish, then orange. Spores very irregular, oval, pyriform, frequently polyedral 20-30μ x 15-23μ.

Aecidium Haustoriatum. on Hedyotis

Granville mass Jun. 1883.

Aecidia caused leaves to swell and become thickened. aecidia densely covering under surface occasionally on upper surface. Spermogonia rather dark colored scattered over under surface of leaf most abundant near apex, ~~subcut~~ subepidermal. Aecidia about 20-30 diam. on 2 objective. Spores orange, nearly smooth, irregularly globose. 15.5-23 μ. average 19 μ. Peridia scarcely projecting beyond surface of leaf.

Puccinia obscura Schroeter

on Luzula, on both sides of leaves. Granville Mass June. 1883.

Uredo-spores brown, echinulate oval or elliptic, sometimes pyriform after they have fallen from their attachment, mixed with what seem to be paraphyses ‖ ‖. 22-30 μ × 19-23 μ.

Telento spores pale brownish 38-45 μ × 15-17 μ. Stalks rather long. Spores narrow ly oblong, constricted at the septum. Apex much thickened. 6-8 μ generally pointed.

Sori small scattered, leaf discolored in spots brownish red, sori at first (uredo) slightly sunken at length projecting but not very prominent. Uredo-sori at first covered by the epidermis.

Aecidium

Chelone.
on Linaria.

Granville. Mass
June 1883.

Spermagonia epiphyllous rather broad at base metuloid spread between epidermis and palisade cells. aecidia hypophyllous in scattered circular spots. Leaf not much thickened or discolored - but showing light green spots above. Spores orange, slightly granular, globose or sub globose 20-30μ mean average 22-23μ. Peridia slightly projecting 12-18 div. no. 2 objective at edge reflexed and with numerous segments.

Aecidium on weeds

on Potentilla & Ranunculus

Newton June, 1883

Sori generally on under surface of leaves and petioles, circular, small 250-350 μ across, making purple spots on leaves. Paraphyses club shaped, spores cinnabar color. Spherical or polyedral. 18-21 μ average 20 μ.

Uredo on rose. Granville June 1883
with Pérous. Speciosum

Spores 20-38μ. average 27-30μ
cinnabar color oval or polyedral, Spots
on leaves petioles and stems elliptic.
sometimes irregular. very irregular
in size and shape. on leaves and
petioles.

Puccinia solida Schw. on anemone.

Gramineæ June 1885

Sori purplish black scattered on under surface of leaf, forming circular depressed spots on upper side of leaf. Sori dense, packed together almost sessile, linear or linear clavate, scarcely constricted in the middle. 46–64 μ long by 7½–13½ μ. average 57 × 11 μ. obliquely truncate at apex which is much thickened (about 7½–11 μ) and brownish yellow; pedicel colorless, either persistent or sometimes truncate. No paraphyses. Germinates on the spot.

Uromyces Lilium.

Granville June, 1883.

Aecidia & Teleutosores hypophyllous, aecidia scattered on under surface of leaves, pale orange. Spores orange, globose or somewhat elongated, 23–26½ μ in diam. Teleutosores amphigenous, covered by epidermis irregularly scattered on dead spots, oval, prominent. Teleutospores brown, short stalked, irregularly ovate or elliptical, or hysteroid, covered with small glandular papillae 26–44 μ X 22–26 μ

Aecidium Menthae Granville,
June, 1883.

spots round scattered not much distortion. Spermogonia thickly [illegible]

(1) accidia collected irregularly in spots about 130 – 250 μ in diam. Peridium gloriose, pale-colored 19 – 23 μ in diam. Peridia irregularly divided and reflexed rising but little above surface of leaf

accidia hypophyllous or epiphyllous nearly smooth

aecidium on Acnodactyla
Greenville.
June. 1883

Forming thickened bright red
spots bordered with yellow.
aecidia hypophyllous in spots ~~around~~
~~the hypophyllous spermogonia.~~
aecidia 200-300 μ broad. Spores
globose ~~&~~ orange, 15-19 μ. ~~broad~~ ~~diam~~.
surface rather smooth.
Spermogonia small on upper surface

Silphium terebinthinaceum f. Pitcheri
Helianthus strumosus f. Jettiae
H. tuberosus f. scaber. H. decapetalus f. glaucus

J. C. Strong, Pres J. M. Williams, Cash

Established A. D. 1855.

Winneshiek Co. Bank,

MRS. H. S. WEISER & CO.

Decorah, Iowa, May 11 1883

Prof. Wm. Farlow.
Cambridge

I enclose a Puccinia on Andropogon scoparius which may be of interest to you I can not decide it with certainty.

Yours Truly
Edw. W. Holway

Basidiospores
in Erysiphe.
Barrill, Phys. K. S.
P. antiqua
3/8 Mch. 1883
Dem. 1884.

Aecidium on Peltandra

abundant, particularly on midrib and veins aecidia & spermogonia mixed. Spores buff orange, 22–34 μ average 26–28 μ. Aecidia arranged. Spermogonia (Uredo)-related.

Aecidium on

Granville

June, 1883.

Spots purple. Spermogonia epiphyllous
subepidermal spherical. Aecidia
usual 200-250 μ across, peridia slightly
prominent, circular. Spores pale
slightly granular 16-23 μ. average 19-20 μ
Aecidia hypophyllous (and epiphyllous?)

Aecidium on Pinus Granville

June. 1883

Forms rather large scattered spots of rather pale yellow color. Thermopsis diphyllous

Aecidia hypophyllous, spores orange rather smooth, globose or elliptic, 17-23 μ, averaged 19-20 μ. Peridia narrow but rather long and distinct. Borders divided and reflexed.

P. atlanticum

Spores dark reddish brown, prominently marked, irregularly elliptoidal, sometimes elliptoidal. 6-8 diameter.

P. mammillare

Spores nearly colorless, minutely roughened, prominently marked. Irregular, generally narrowly ellipsoidal, rarely globose, 6-10 by 3-4½ diam.

Puccinia on Saxifraga.

Granville.

Spots purplish-black, scattered on both sides of leaf, naked, oval or somewhat elongated. Spores on moderately long ~~stalks~~ 26-30 μ ~~30-35~~ μ × 16-20 μ oval or ovoid, obtuse at both extremities, much constricted in middle with distinct hyaline papilla, Epispore marked with fine flexuous ridges.

Puccinia on Sax. Virginica

Waltham May 9, 1886, Pammel.

Has very short pedicels and spores not much constricted at septum. papilla and striae marked

Measurements as above.

aecidium - Gymnosporangium

Farmington
June, 1883.

Scattered spots, yellowish or yellowish red, convex below. Spermogonia epi & hypophyllous. aecidia 200-300 μ. Spores globose yellow, rather smooth 16-20 μ.

aecidium Jambuci. Granville
Inaes

Spots concave yellow spots on upper side of leaf and reddish convex swellings on under side. principally on veins. petiole also swollen and distorted. Spermogonia epid hypophyllous, deep seated. aecidia 300-400 μ slightly projecting beyond the surface divided & reflexed. Spores 20-23 μ orang-, ratio smooth.

aecidium Urticae. Granville.

on leaves causing slight elevations on upper surface. On petioles causing swellings and curvatures. aecidia large 350-300 μ not much mixed. Border much divided. Spores orange yellow 19-23 μ. rather smooth.

Aecidium on Viola cucullata.

Granville.

Spots yellow. Aecia on the veins. Aecidia 200–250 μ, spores yellow rather smooth 16–20 μ. Peridia rather short and lacinate. Aecidia on both surfaces of leaves. Spermogonia epiphyllous

Nicht an rose mit Phragmidium
subcorticum.

Peridermium elatinum.

on abies balsamea

Ripon. Vt. Ezra Brainard.

June 20th, 1883.

The new years stems are stout, pale delicate green, leaves short and thick. Sori ellipitical, in a row on each side of midrib on underside, spores irregular, orange colored, oval or narrow elliptic, finely areolate, 19-27μ x 12-17μ, walls somewhat sunken in leaves. Peridium thin.

On Abies Canadensis.

Chebucto Lake.

June. 1883.

On new shoots. Therm of one
on both sides of leaves. Sori in
a single row on each side of
leaf. Sori round or oblong. Spore
waxy yellow, very dark, coalescing to
spherical or oblong.

Sori not much raised peridium
soon disappearing

Puccinia Majidis.

Uredo spots small oblong, rusty-brown spores brownish orange, irregularly globose 22-26 μ x 25-30 μ. no paraphyses, sinuulose.

Teleuto spores brown, oblong ovate or cuboid long stalked, generally obtuse at apex, slightly constricted 30—40 μ x 16-22 μ, sometimes slightly pointed at apex, tip not at all or slightly thickened. One celled spores frequent.

25
28
414

Aecidium on Hepatica

Decorah. Iowa, 25-40 large divisions

Aecidia thickly scattered over the lower surface of the leaves which are altered in color. Peridia usually 5-6-7 cleft-toothed not much raised. Spores broadly oval or irregular & colorless, 22-26 μ brownish. Spermogonia brownish on both sides of leaf.

Aecidium aurilleum P. &. (cruciferae ?)

from Walhalla Dakotah

Warren Upham. May, 1884.

Leaf affected discolored and reduced in size. Spermogonia on both sides of leaves, subcuticular, sulphur yellow. Aecidia numerous densely covering under side of leaves, about 300-400 μ. (peridia barely raised above the epidermis and opening by a small (involute ?) pores sulphur yellow, spherical, or slightly ovate or ellipsoidal 20-26 μ in diam.

aecidium on Thalictrum.

Wellesley. June. 1884.

On scattered small spots on
leaves and petioles causing swelling
on under side. Spots above
purple with few Spermogonia subepi-
dermal. aecidia densely crowded
few in number. Peridia short teeth
not prominent, spores orange
yellow 22 – 27 μ in diam.

aecidium on Mulgedium or Lactuca
Hobart. June. 1884.

Large Yellow concave spots on upper surface
Cover surface convex. aecidia very
numerous and crowded in the
spots. Peridia short. Teeth short and
very numerous. Spores orange.
16-20 μ diam. Spermogonia epiphyll
and in centre below. a few aecidia
on upper surface.

Puccinia Parkeri Pk.

on *Veronica alpina* Colorado

Herb. Barrill.

~~Sori~~ numerous densely covering the under side of leaf and a few on the upper surface, color of sori dark brown, sori naked. Spores oblong, obtuse at apex with a thickened wall, some attenuated at base, pedicels medium length scarcely constricted at septum Spores 38–50μ × 19–23μ.

Puccinia congregata Ell. & Harkn.
on Heuchera micrantha.
California Barbareas.
Herb. Burrill.
Circular dark reddish purple spots
~~1/2~~ a quarter of an inch in diam.
on upper surface of leaf. Sori
on under side of leaf, form, closely
packed together and occupying
the centre of a brownish purple
spot.

Puccinia Cryptotaeniae, P. &.

on Cypt. Canadensis.

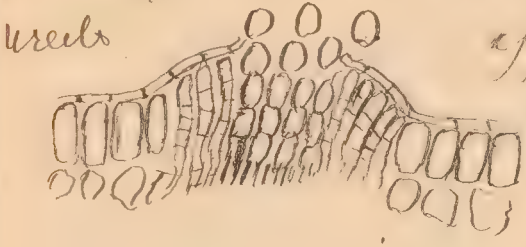
Near Troy, N. Y.

comm. Barrill.

Spots at first light yellow then darker brown, irregular. Pari hypophyllous, a few epiphyllous numerous, clustered at first much deeply in the leaf and covered by epidermis which ruptures circularly looking like an aecidium.

Chrysomyxa Ledi

Cram. & Pat. Jub. 12. Mr. Saxon.



Spores brick red, subglobose to ovate or ellipsoid, 30-35 μ × 20-23 μ.

Spores light brown about 22-32 μ x 18-21 μ. very irregular in shape, being generally irregularly and angularly ovoid obtuse occasionally elliptical A pedicel very short, generally decidedly shorter than the spore. Spore surface smooth. No terminal papilla. (no paraphyses.?)

On stems and bracts. The uredo mores indistinct pale spots and the teleutospores seem to be covered by epidermis until very late.

Uromyces on Allium Canadense

May 23. 1886. Waverley Mass.
near the house of Pammel.

Uredo: Sori minute, round or more frequently narrowly ovals or linear numerous, light yellow. Spores nearly globose 22-30 μ in diam. orange yellow, surface smooth or only very slightly granulated. Paraphyses (?) but the whole sorus has hyaline slightly clavate filaments which may be paraphyses.

Teleutospore: Sori dark brown, long covered by the epidermis, small and dot like either mixed sparsely with the uredo sori or collected by themselves in irregular shots. (See opposite page.)

Puccinia on Nabalus.

Cambridge, May, 1886.

Teleutospores in sori on the under surface of midribs and especially on the petiole, linear-oblong, black, appearing often the (aecidia?) but before they have disappeared. Spores dark brown, oval or ellipsoid, 30-38 μ × 21-24 μ. Obtuse at both ends, not constricted at septum, surface somewhat roughened. Stalks short rather stout and often obliquely attached.

Uredo with Puccinia, in same sorus. Uredo-spores brownish somewhat polygonally-globose

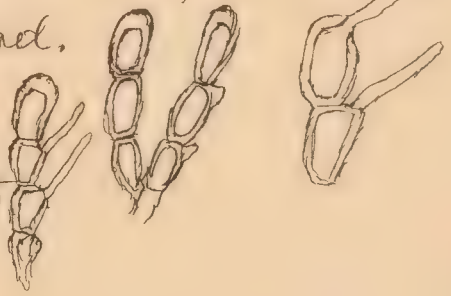
surface ~~spiny~~ spiny, spores 22–24μ
in diam.

Phragmidium on Rubus

Hispidus Purgatory Swamp.

May 30th 1886.

Spots small, scattered over the under surface of leaves. indefinitely with spots or distortions. Pale yellow the spores germinating in the spots. Spores concatenate, about three in a chain. Chains 76μ-114μ long, 15-21μ broad. No paraphyses. Germination apparently a promycelium.



Aecidium on Verbena
stricta Illinois Sept
received. Aug. 1886.
Spots
good sized. aecidia hypophyllous
small crowded more or less
circularly arranged.
peridia short. Spores bright
cinnabar color, globose or
somewhat polyedral, 20-26 μ
in diameter, surface nearly
smooth only finely granulated.
Many of the spores have
wall considerably thickened
on one side.

40c

#154 ale
12

PATENT BACK

Scrap Book.

Pat. March 28, 1876.